

Serial No. 09/879,724  
Attorney Docket No. F0522  
Firm Reference No. AMDSP0414US

Supplemental Amendment to Office Action Dated August 19, 2003  
Supplemental Amendment Dated November 5, 2003

#### AMENDMENTS IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-19. (cancelled)

20. (previously presented) A semiconductor-on-insulator (SOI) structure comprising;  
a semiconductor substrate;  
a leaky, thermally conductive insulator material (LTCIM) layer disposed directly on the semiconductor substrate;  
a semiconductor layer disposed directly on the LTCIM layer; and  
active regions defined in the semiconductor layer by isolation trenches and the LTCIM layer,  
wherein the LTCIM layer comprises at least one of doped amorphous silicon having a dopant species selected from one of boron, phosphorous and fluorine, undoped amorphous silicon and undoped porous silicon,  
wherein the LTCIM layer extends over an entire lateral dimension of the semiconductor substrate, and  
wherein the semiconductor layer is germanium (Ge).

21. (previously presented) The SOI structure according to claim 20, wherein the semiconductor substrate material is silicon (Si), silicon carbide (SiC), silicon germanium (SiGe) or any other semiconductive material.

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22. (previously presented) The SOI structure according to claim 20, wherein the LTCIM layer has a thermally conductivity value between about 30 W/mK to about 170 W/mK.
23. (previously presented) The SOI structure according to claim 20, wherein the LTCIM layer preferably has a resistivity value 10 Ohms-cm or greater.
24. (previously presented) A semiconductor-on-insulator (SOI) structure comprising;  
a semiconductor substrate;  
a leaky, thermally conductive insulator material (LTCIM) layer disposed directly on the semiconductor substrate; and  
a semiconductor layer disposed directly on the LTCIM layer,  
wherein the LTCIM layer comprises at least one of doped amorphous silicon having a dopant species selected from one of boron, phosphorous and fluorine, undoped amorphous silicon and undoped porous silicon,  
wherein the LTCIM layer extends over an entire lateral dimension of the semiconductor substrate, and  
wherein the semiconductor layer is germanium (Ge).
25. (previously presented) The SOI structure according to claim 24, wherein the semiconductor substrate material is silicon (Si), silicon carbide (SiC), silicon germanium (SiGe) or any other semiconductive material.

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26. (previously presented) The SOI structure according to claim 24, wherein the LTCIM layer has a thermally conductivity value between about 30 W/mK to about 170 W/mK.

27. (previously presented) The SOI structure according to claim 24, wherein the LTCIM layer preferably has a resistivity value 10 Ohms-cm or greater.